

Application No.: 10/026,171
Response dated: March 7, 2005
Reply to Office Action of December 10, 2004

This listing and amendment of the claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method for preparing a supported catalyst composition system comprising:
 - (a) first heating a composition comprising a metallocene catalyst compound to a temperature of from 75°C to 125°C; and
 - (b) then combining the heated composition with a carrier.
2. (Original) The method of claim 1 wherein the carrier is heated.
3. (Previously Presented) The method of claim 1 wherein in step (a) the composition is heated to a temperature in the range of from 75°C to 100°C, and wherein said composition comprises said metallocene catalyst compound and an activator.
4. (Previously Presented) The method of claim 2 wherein the carrier is heated to a temperature in the range of from 26°C to 150°C.
5. (Currently Amended) The method of claim 3 wherein the metallocene catalyst compound has a solubility less than 20 weight percent of metallocene catalyst compound in toluene at ~~(25°C)~~ 25°C, and wherein said activator is selected from one of alumoxane; a modified alumoxane; ionizing activators, neutral or ionic; or combinations thereof.
6. (Currently Amended) A method for making a supported catalyst composition comprising:
 - (a) first forming a reaction product comprising a metallocene catalyst compound and an activator;
 - (b) second heating the reaction product to a temperature of from 60°C to 125°C;
 - (c) then introducing a carrier, optionally heating the carrier;
 - (d) combining the heated reaction product with the carrier or optionally the optionally heated carrier.

Application No.: 10/026,171
Response dated: March 7, 2005
Reply to Office Action of December 10, 2004

7. (Original) The method of claim 6 wherein the reaction product is heated to a temperature in the range from 75°C to 100°C.
8. (Previously Presented) A method for making a supported catalyst composition comprising:
 - (a) a first step consisting essentially of heating an activated metallocene catalyst product to a temperature of from 60°C to 125°C;
 - (b) a second step comprising heating a carrier; and
 - (c) a third step comprising combining the heated carrier and the heated activated metallocene catalyst.
9. (Currently Amended) The method of claim 8 wherein the activated metallocene catalyst is heated to a temperature of from 75°C to 100°C and wherein said activator is ~~selected from one of an~~ alumoxane; a modified alumoxane; ionizing activators, neutral or ionic; or combinations thereof.
10. (Previously Presented) A method for preparing a supported catalyst composition comprising:
 - (a) a first step consisting essentially of heating a composition comprising a metallocene catalyst compound and an activator to a first temperature, wherein the first temperature is in the range of from 60°C to 110°C;
 - (b) a subsequent step comprising heating a carrier at a second temperature; and
 - (c) a subsequent step comprising combining said metallocene catalyst, and said carrier, at a third temperature.
11. (Original) The method of claim 10 wherein the first, second and third temperatures are the same.
12. (Original) The method of claim 10 wherein the first and second temperatures are the same.

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Application No.: 10/026,171
Response dated: March 7, 2005
Reply to Office Action of December 10, 2004

13. (Cancelled)
14. (Previously Presented) A method for preparing a supported catalyst composition comprising:
 - (a) forming a catalyst system consisting essentially of a metallocene catalyst compound and an activator at a temperature in the range of from 60 °C to 125°C; and
 - (b) subsequently introducing a further component comprising a carrier.
15. (Original) The method of claim 14 wherein the supported catalyst composition is dried or substantially dried to a free flowing powder composition.
16. (Original) The method of claim 15 wherein the free flowing composition is reshurried in a liquid.
17. (Original) The method of claim 16 wherein the liquid is mineral oil.
18. (Previously Presented) The method of claim 14 wherein the metallocene catalyst compound and activator are combined at a temperature of from 60 °C to 110°C.
19. (Previously Presented) The method of claim 14 wherein the metallocene catalyst compound and activator are combined at a temperature of from 60°C to 100°C.
20. (Previously Presented) The method of claim 14 wherein the metallocene catalyst compound and activator are combined at a temperature of from 75°C to 100°C.
21. (Previously Presented) A method for preparing a supported catalyst composition comprising:

Application No.: 10/026,171
 Response dated: March 7, 2005
 Reply to Office Action of December 10, 2004

- a) combining a metallocene catalyst compound and an activator at a temperature in the range of from 60°C to 110°C; and
- b) introducing a carrier.

22. (Previously Presented) The method of claim 21, wherein the metallocene catalyst compound and activator are combined at a temperature of from 75°C to 100°C.
23. (Currently Amended) The method of claim 1, wherein said metallocene catalyst compound is described by the formula:



L^A , L^B , are selected from the group consisting of cyclopentadienyl ligands, cyclopentaphenanthrenyl ligands, indenyl ligands, benzindenyl ligands, fluorenyl ligands, octahydrofluorenyl ligands, cyclooctatetraendiyl ligands, cyclopentacyclododecene ligands, azenyl ligands, azulene ligands, pentalene ligands, phosphoyl ligands, phosphinimine, pyrrolyl ligands, pyrozolyl ligands, carbazolyl ligands, and borabenzene ligands, including hydrogenated versions thereof; independently, each L^A and L^B may be is the same or different; M is selected from the group consisting of zirconium, hafnium and titanium, Q is a monoanionic labile ligand having a sigma-bond to M; depending on the oxidation state of M, the value for n is 0, 1 or 2 such that the catalyst compound comprises a neutral metallocene catalyst compound; A is a bridging group comprising selected from the group consisting of a carbon, oxygen, nitrogen, silicon, aluminum, boron, germanium and tin atom or a combination thereof, and wherein said activator is selected from one of an alumoxane; a modified alumoxane; ionizing activators, neutral or ionic; or combinations thereof.

24. (Currently Amended) The method of claim 23, wherein L^A , L^B , are tetrahydroindenyl ligands; A is represented by a member of the group consisting of R'_2C , R'_2Si , $R'_2SiR'_2Si$, R'_2Ge , and R'_2P , where each R' is independently, a radical group which is hydride, hydrocarbyl, substituted hydrocarbyl, halocarbyl,

Application No.: 10/026,171
Response dated: March 7, 2005
Reply to Office Action of December 10, 2004

substituted halocarbyl, hydrocarbyl-substituted organometalloid, halocarbyl-substituted organometalloid, disubstituted boron, disubstituted pnictogen, substituted chalcogen, or halogen or two or more R' may be joined to form a ring or ring system, and ~~where in~~ wherein said Q is selected from the group consisting of hydrocarbyl radicals having from 1 to 20 carbon atoms, and halogens.

25. (Previously Presented) The method of claim 24, wherein said A is R'₂Si, where R' is hydrocarbyl; and M is zirconium.
26. (Previously Presented) The method of claim 1, wherein said metallocene catalyst compound is one of dimethylsilyl-bis (tetrahydroindenyl) zirconium dichloride or dimethylsilyl-bis (tetrahydroindenyl) zirconium difluoride, said catalyst composition further comprising an activator, wherein said activator is ~~selected from one of an~~ selected from an alumoxane; a modified alumoxane; ionizing activators, neutral or ionic; or combinations thereof.
27. (Previously Presented) A method for making a supported catalyst composition comprising:
- first forming a reaction product comprising a metallocene catalyst compound and an activator, wherein said metallocene catalyst compound comprises one of dimethylsilyl-bis(tetrahydroindenyl) zirconium dichloride or dimethylsilyl-bis(tetrahydroindenyl) zirconium difluoride;
 - second heating the reaction product to a temperature of from 60°C to 125°C;
 - then introducing a carrier, optionally heating the carrier;
 - combining the heated reaction product with the carrier or optionally the heated carrier.
28. (Previously Presented) A method for making a supported catalyst composition comprising:

Application No.: 10/026,171
Response dated: March 7, 2005
Reply to Office Action of December 10, 2004

- a) first forming a reaction product comprising a metallocene catalyst compound and an activator, wherein said metallocene catalyst compound consists essentially of one of dimethylsilyl-bis(tetrahydroindenyl) zirconium dichloride, dimethylsilyl-bis(tetrahydroindenyl) zirconium difluoride.
 - b) second heating the reaction product to a temperature of from 60°C to 125°C;
 - c) then introducing a carrier, optionally heating the carrier;
 - d) combining the heated reaction product with the carrier or optionally the heated carrier.
29. (Currently Amended) A method for making a supported catalyst composition comprising:
- a) first forming a reaction product consisting essentially of methyl alumoxane and one of dimethylsilyl-bis(tetrahydroindenyl) zirconium dichloride or dimethylsilyl-bis(tetrahydroindenyl) zirconium difluoride, ~~and methyl alumoxane~~;
 - b) second heating the reaction product, to a temperature said heating consisting essentially of ~~a temperature~~ of from 60°C to 125°C;
 - c) then introducing a carrier, optionally heating the carrier;
 - d) combining the heated reaction product with the carrier or ~~optionally~~ the optionally heated carrier.
30. (New) A method for making a supported catalyst composition, comprising:
- (a) first heating a composition comprising an activated metallocene catalyst compound to a temperature of from 65°C to 125°C; and
 - (b) then combining said composition of (a) with a carrier, said carrier being at a temperature of 30- 75°C, to form said supported catalyst composition.
31. (New) The method of claim 30, wherein said heating of said activated metallocene catalyst compound is from 68-100°C.

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Application No.: 10/026,171
Response dated: March 7, 2005
Reply to Office Action of December 10, 2004

32. (New) The method of claim 30, wherein said heating of said activated metallocene catalyst compound is from 75-100°C.
33. (New) The method of claim 30 wherein said method further comprises: after a) and b) , (c) then drying said supported catalyst composition at a temperature of from 65°C-75°C.
34. (New) A method for making a supported catalyst composition, comprising:
- (a) first forming a reaction product comprising a metallocene catalyst compound and an activator, wherein said metallocene catalyst compound comprises one of dimethylsilyl-bis(tetrahydroindenyl) zirconium dichloride or dimethylsilyl-bis(tetrahydroindenyl) zirconium difluoride;
 - b) second heating the reaction product to a temperature of from 65°C to 75°C;
 - (b) then combining said composition of (a) with a carrier, said carrier heated to 65-75°C, to form said supported catalyst composition.
35. (New) A method for making a supported catalyst composition, comprising:
- (a) first forming a reaction product of an activator and a metallocene catalyst compound, then heating said reaction product to a temperature of from 65°C to 75°C; and
 - (b) then combining said reaction product of (a) with a carrier, said carrier heated to 30-75°C, to form said supported catalyst composition;
 - (c) then drying said supported catalyst composition at a temperature of from 65°C-75°C.